January 15, 2015

Dear Interested Parties:

REQUEST FOR EXPRESSION OF INTEREST: DOUBLE-SHELL TANK INTEGRITY PROJECT ULTRA SONIC TESTING AND RADIOGRAPHY

Washington River Protection Solutions, LLC (WRPS) as a prime contractor to the U.S. Department of Energy is issuing this Request for Expression of Interest (EOI) as a means of conducting market research to identify parties having an interest in and the resources to provide Ultra Sonic Testing on Double-Shell Tanks (DST) and performing Radiography services in support WRPS' mission.

Ultrasonic Testing Inspection Scope

WRPS under contract from the U.S. Department of Energy (DOE) is responsible for assessing the condition of the double-shell tanks (DST) of the Hanford Nuclear Site. Ultrasonic testing (UT) inspections of primary tank walls are completed to assess the condition of the tanks, judge the effects of past corrosion control practices, and satisfy regulatory requirements to periodically (eight to ten year frequency) assess integrity of the tanks per Brookhaven National Laboratory (BNL) guidelines for structural integrity programs for tank systems (BNL-52527, *Guidelines for Development of Structural Integrity Programs for DOE High-Level Waste Storage Tanks*).

The major requirements for the UT of each tank are to detect, characterize (identify, size and locate), and record measurements made of any wall thinning, pitting or cracks that might be present in the wall of the primary tank. The UT program examines representative areas of the primary tank and secondary liner by deploying equipment in the annulus of the tank through two 24" diameter risers approximately 180° apart. Ultrasonic testing is performed by deploying an ultrasonic transducer to the outer surface of the primary tank wall via a remotely operated magnetic crawler. A depiction of a DST and magnetic crawler are provided in Attachment 1, Figures 1, 2 and 3.

UT examinations shall be carried out as follows:

- Entrance to the annulus is made through two risers and the same two risers are revisited every cycle to allow comparison and accurate wall loss estimates.
- Two thirty-inch wide vertical scans of the primary tank wall for all DSTs.
- Twenty-foot length of circumferential weld joining the primary tank vertical wall to the lower knuckle and adjacent heat-affected zone for all DSTs.
- Twenty-foot length of vertical weld joining shell plate courses of the primary tank, extended as necessary to include at least one foot of vertical weld in the nominally thinnest wall plate and adjacent heat-affected zones for all DSTs.
- Twenty-foot long circumferential scan at a location in the vertical portion of the primary tank wall corresponding to a static liquid/vapor interface level that existed for any 5-year period, extending at least 1 foot above that liquid/vapor interface for six DSTs.
- Twenty-foot long circumferential scan of the predicted maximum stress region of the primary tank lower knuckle for six DSTs.

Equipment necessary to perform this scope will be provided to the subcontractor by WRPS. The subcontractor will be required to qualify through a Performance Demonstration Test conducted by a third party, on this equipment. Once qualified, the subcontractor will operate this equipment in performance of this work.

Additional tasks include the following:

- Confer with WRPS Project Engineer on direction for all equipment related decisions/issues.
- Technical interface with the Project Engineer.
- Approve UT equipment navigational capabilities and deployment capability from tank riser per performance demonstration tests.
- Coordinate and lead performance demonstration tests.
- Test and operate equipment in tank mock-up.
- Set up and operate inspection equipment.
- Interpret and deliver inspection data.
- Maintain WRPS furnished UT equipment
- Prepare UT Inspection Reports

The Subcontractor is expected to provide appropriately trained and qualified staff to perform the type of work specified. The Subcontractor shall maintain company and regulatory required certifications and qualifications for personnel. The expectation is that the subcontractor will be able to provide the following skills.

- Certified Level III personnel to oversee Subcontractors NDE program for each applicable NDE method.
- Certified Level II personnel to perform NDE in support of WRPS needs.
- Certified Level I personnel NDE activities as described in the subcontractor's approved written practice.

Radiography Scope

The subcontractor shall provide highly skilled personnel that possess unique professional experience in Radiography which is needed to perform this work. The personal shall have current certifications and continued company provided training needed to demonstrate and perform Nondestructive Examination (NDE) radiography activities. Qualifications shall be to industry standards as provided in the American Society of Nondestructive Testing Recommended Practice SNT-TC-1A (Latest Revision) American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section V Nondestructive Examination, 2004 or latest revision and ASME NQA-1 2004 Supplementary Requirements for the qualification of Nondestructive Examination Personnel.

- Certified Level III personnel to oversee Subcontractors NDE program for each applicable NDE method.
- Certified Level II personnel to perform NDE in support of WRPS needs.

- Certified Level I personnel NDE activities as described in the subcontractor's approved written practice.

The Contractor shall provide certified NDE technicians and specialists, in accordance with their approved program, to conduct NDE radiography, leak checking and technical support of the mobile core-sample X-ray system (X-ray carts) and real-time radiography. Work activities shall be performed in accordance with submitted contractor's procedures and practices that meet standard industry practices.

THERE IS NO SOLICITATION AT THIS TIME. This request for capability information does not constitute a request for proposals. Submission of any information in response to this market survey is purely voluntary and WRPS assumes no financial responsibility for any cost incurred.

WRPS will evaluate the market information to ascertain potential market capacity to provide services consistent with those described in this EOI. Telephone inquiries will not be accepted or acknowledged and no feedback or evaluations will be provided to companies regarding their submissions.

Submission Instructions: Interested parties who consider themselves qualified to perform the above-listed services are invited to submit a capability statement in response to the EOI by January 29, 2015. The capability statements shall be no more than ten (10) pages, and no smaller than 12 point font. All responses must be emailed to Mari_L_Roden@rl.gov.

At a minimum, capability statements shall contain the following information:

1. Organization name, address, email address, website address, and telephone number;
2. Business size standard, to include socio-economic status (veteran owned small business, service-disabled veteran owned small business, HUBZone small business, small disadvantaged business, or woman-owned small business).
3. Tailored capability statements addressing the particulars of this effort, with appropriate documentation supporting claims of organizational and staff capability.

WRPS reserves the right use any and all information submitted by, or obtained from, and interested party in any manner WRPS determines is appropriate, including, but not limited to, the creation of a competitive solicitation.

WRPS looks forward to hearing from you regarding this request.

Sincerely,

Mari Roden, Procurement Specialist

Attachment 1

Figure 1 Double-Shell Tank Components

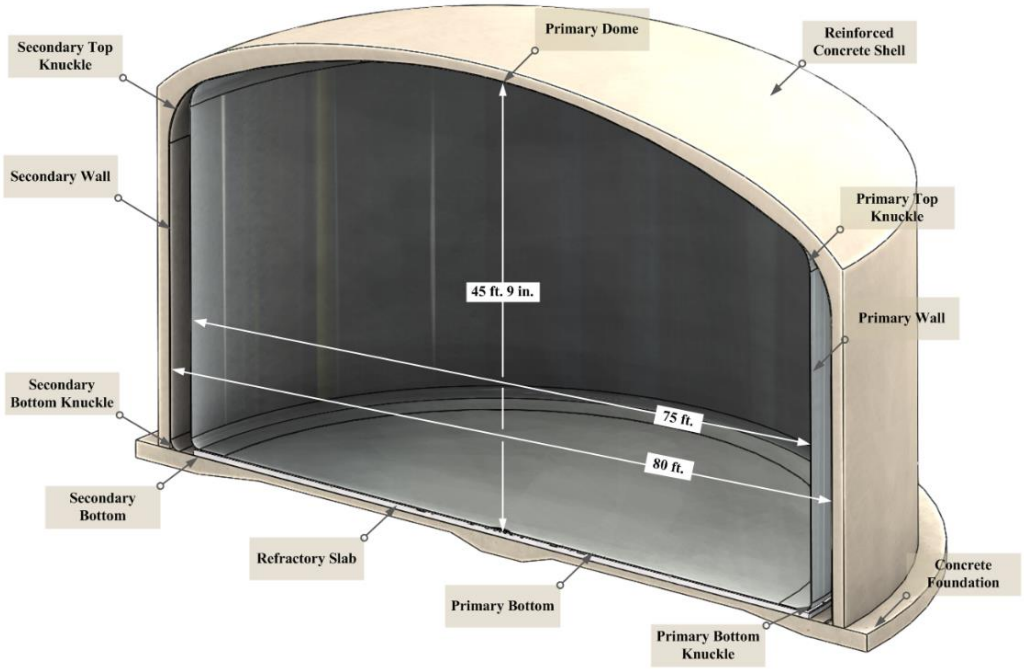

Figure 2 Primary Tank Wall Course Layout

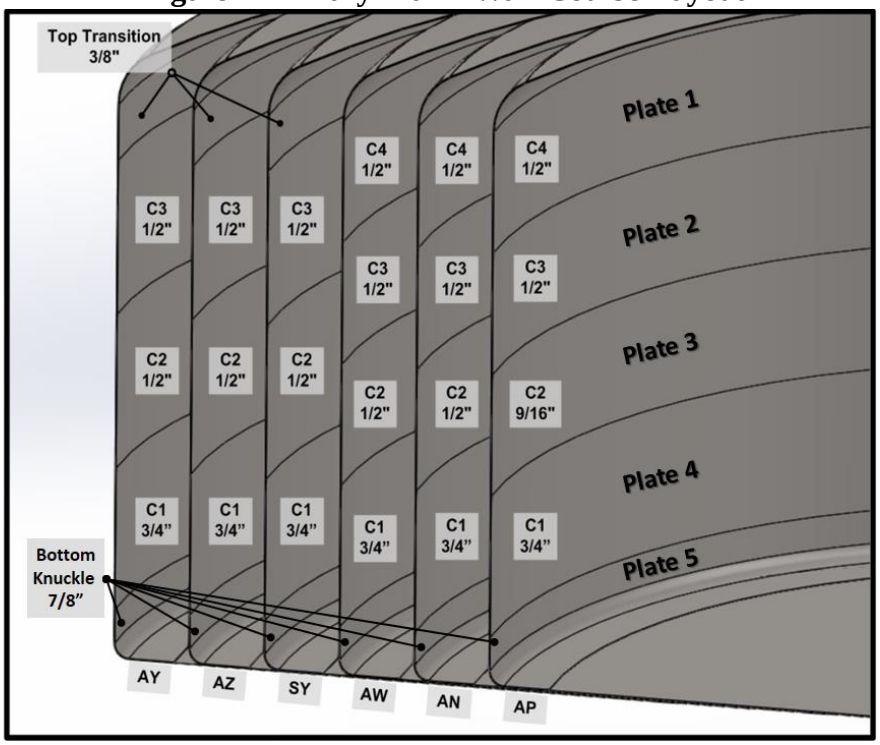

Figure 3 Force Institute AWS-5D, AGS-1 and AGS-2 Magnetic Wheeled Crawlers